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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/034,727	12/26/2001	Sukanta Banerjee	4364-4005	1379
23973 7590 02/09/2007 DRINKER BIDDLE & REATH ATTN: INTELLECTUAL PROPERTY GROUP ONE LOGAN SQUARE 18TH AND CHERRY STREETS PHILADELPHIA, PA 19103-6996			EXAMINER YANG, NELSON C	
			ART UNIT 1641	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE 3 MONTHS		MAIL DATE 02/09/2007	DELIVERY MODE PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	Application No. 10/034,727	Applicant(s) BANERJEE ET AL.	
	Examiner Nelson Yang	Art Unit 1641	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 November 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 83-86, 88, 89 and 91-99 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 83-86, 88, 89 and 91-98 is/are rejected.
- 7) ☒ Claim(s) 99 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

**DETAILED ACTION**

***Response to Amendment***

1. Applicant's amendment of claim 92 is acknowledged and has been entered.
2. Applicant's addition of claims 98, 99 is acknowledged and has been entered.
3. Claims 83-86, 88, 89, 91-99 are currently pending.

***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:  
  
The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
5. Claim 94 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
6. Claim 94 recites the limitation "the opposing planar surfaces" in the first two lines of the claim. There is insufficient antecedent basis for this limitation in the claim.
7. With respect to claim 94, since applicant do not recite two opposing planar surfaces, it is not clear how the thickness of the gel embedded bead assembly would be defined.

***Claim Rejections - 35 USC § 102***

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for

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patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9. Claims 92, 83-86, 88, 91, 93-95, 97, 98 are rejected under 35 U.S.C. 102(e) as being anticipated by Kain et al. [US 2002/0039728].

With respect to claim 92, Kain et al. teach wells comprising beads and a photopolymerizable reagent, and shining a light to polymerize and trap the beads (para. 0198). Kain et al. further teach that the beads may be encoded with identifier moieties which identify agents on the beads (para. 0196), such as identifier binding ligands (para. 0166).

10. With respect to claim 83, Kain et al. teach that the identifier moieties may comprise fluorescent molecules (para. 0197).

11. With respect to claim 84, Kain et al. teach that the polymer formed would contain hydrophilic residues (para. 0147).

12. With respect to claim 85, Kain et al. teach that the identifier binding ligands may comprise receptors (para. 0167).

13. With respect to claim 86, Kain et al. teach that the identifier binding ligands may comprise proteins (para. 0167).

14. With respect to claim 88, Kain et al. teach that the substrate may be silicon (para. 0046).

15. With respect to claim 91, Kain et al. teach that the particles may include magnetic particles (para. 202).

16. With respect to claim 93, Kain et al. teach a substrate upon which the polymerization occurs (para. 0072, 0198).

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17. With respect to claim 94, Kain et al. teach wells comprising beads and a photopolymerizable reagent, and shining a light to polymerize and trap the beads (para. 0198). Kain et al. further teach that the array may be enclosed (para. 0094). Therefore the thickness of the polymer formed would be defined by the top and bottom of the wells (the opposing surfaces).

18. With respect to claim 95, Kain et al. teach that the plastic which beads are embedded in may be porous to allow access to samples (para. 0049).

19. With respect to claim 97, Kain et al. teach that the substrate may be silicon (para. 0046).

20. With respect to claim 98, Kain et al. teach wells comprising beads and a photopolymerizable reagent, and shining a light to polymerize and trap the beads (para. 0198). Kain et al. further teach that the array may be enclosed (para. 0094). Therefore the thickness of the polymer formed would be confined by the top and bottom of the wells (the opposing surfaces).

### *Claim Rejections - 35 USC § 103*

21. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

22. Claim 89 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kain et al. [US 2002/0039728].

With respect to claim 92, Kain et al. teach wells comprising beads and a photopolymerizable reagent, and shining a light to polymerize and trap the beads (para. 0198).

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Kain et al. further teach that the beads may be encoded with identifier moieties which identify agents on the beads (para. 0196), such as identifier binding ligands (para. 0166). Although Kain et al. do not teach the beads have an average diameter of 0.5  $\mu\text{m}$  to 100  $\mu\text{m}$ , Kain et al. do teach that the beads may fit into the wells of a microtiter plate (para. 0217). Furthermore, it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable range involves only routine skill in the art. *In re Aller*, 105 USPQ 233. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have the beads of Kain et al. to have an average diameter of 0.5  $\mu\text{m}$  to 100  $\mu\text{m}$  through normal optimization procedures known in the art.

23. Claim 96 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kain et al. [US 2002/0039728] in view of Pierce et al. [US 4,258,001].

Kain et al. discloses the claimed invention except that instead of disclosing a polymer that is self-supporting, Kain et al. discloses that the polymer is supported by a well. Pierce et al., however, show that self-supporting polymer and polymers supported by a carrier are equivalent structure known in the art (column 24, lines 65-67). Therefore, because these two types of polymers were art-recognized equivalents at the time the invention was made, one of ordinary skill in the art would have found it obvious to substitute for a polymer that is self-supporting for a polymer supported by a carrier such as a well.

***Allowable Subject Matter***

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24. Claim 99 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Response to Arguments***

25. Applicant's arguments with respect to claims 83-86, 88-89, 91-98 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

26. No claims are allowed.

27. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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28. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nelson Yang whose telephone number is (571) 272-0826. The examiner can normally be reached on 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Long V. Le can be reached on (571)272-0823. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Nelson Yang  
Patent Examiner  
Art Unit 1641

  
LONG V. LE 02/05/07  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 1600